

KACHEMAK BAY RESEARCH RESERVE

COMMUNITY MONITORING

Invasive Species & Harmful Algal Blooms

ISSUE:

Invasive species are the number two cause of extinction in the United States and negatively impact native populations of fish and game. Invasive species are extremely difficult or impossible to remove once they are firmly established, making early detection and rapid response critical.

Harmful algal blooms (HABs) have potentially fatal consequences for people who consume wild shellfish. Monitoring for toxin-producing algae in Kachemak Bay may provide an early warning system to shellfish harvesters, should a toxic bloom develop.

KBRR's monitoring programs utilize community volunteers of all ages to assist in the detection of invasive species and HABs. Volunteers are trained in identification and sampling techniques, providing a valuable service to the community.

OBJECTIVES:

- ❑ Recruit, train and support volunteer monitors to help detect invasive species and HABs.
- ❑ Detect and respond to invasive European green crab and tunicate species as quickly as possible upon their arrival in Kachemak Bay.
- ❑ Monitor for HABs in Kachemak Bay and alert the public should a potentially harmful bloom be detected.

METHODS:

- ❑ Trained volunteers set and retrieve crab traps targeting green crabs twice monthly throughout the summer months.
- ❑ Settling plates (tunicate detection tool) are deployed in Homer and Seldovia Harbor to monitor for invasive tunicates. Plates are pulled, examined and redeployed quarterly throughout the year.
- ❑ Volunteers sample phytoplankton at various locations during peak months. Samples are examined, identified and counted under the microscope in order to identify potentially dangerous blooms.



Students monitor for green crabs

HIGHLIGHTS

INVASIVE SPECIES ON THEIR WAY

- ❑ Green crab and tunicates (a type of marine invertebrate) have negatively impacted native and farmed shellfish stocks in WA, OR & B.C. and are moving north.

HARMFUL ALGAL BLOOMS (HABs)

- ❑ Paralytic shellfish poisoning (PSP) is caused by toxin producing algae. Eating wild shellfish harvested during a HAB has resulted in sickness and death in AK.

STATUS: IN PROGRESS

NEXT STEPS: INCREASE RAPID RESPONSE CAPABILITY FOR INVASIVE ERADICATION EFFORTS.

PARTNERS

- ❑ SMITHSONIAN ENVIRONMENTAL RESEARCH CENTER (SERC)

